

IN THE CLAIMS

Please cancel claims 2 and 9.

Please amend claims 1, 5, 8, 12, 14, 15, 20 and 23.

The text of all pending claims, along with their current status, is set forth below:

1. (Currently Amended) A ~~hardware-implemented~~ color video data correction filtering system, comprising:

a monitor profile that comprises monitor specific color characteristics and monitor specific input-output characteristics;

~~a plurality of linearization tables to gamma decompensate input color video data referenced to a non-linear color space;~~

a plurality of ~~[[a]]~~ sets of ~~pre-calculated~~ gamut shifting arrays adapted to obtain the monitor specific color characteristics from the monitor profile to compensate for color point data of a plurality of constituent colors of a color monitor with each set of ~~pre-calculated~~ gamut shifting arrays corresponding to a multiplication look-up table (MLUT) comprising ~~pre-calculated~~ values that represent specific multiplication operations, ~~each set of pre-calculated gamut shifting arrays coupled to one linearization table of the plurality of linearization tables; and~~

~~a plurality of hardware adders with each hardware adder coupled to one of the set of pre-calculated gamut shifting arrays; and~~

a plurality of non-linearization tables, each adapted to receive an input from one of the sets of gamut shifting arrays coupled to the plurality of hardware adders and to obtain the monitor specific input-output characteristics from the monitor

profile to compensate for non-linearities of the color monitor and produce output color video data compensated for non-linearities and color points of the color monitor.

2. (Canceled)

3. (Original) The color filtering system of claim 1, wherein the non-linear color space is an sRGB color space.

4. (Canceled)

5. (Currently Amended) The color filtering system of claim 1, further comprising: a graphics controller coupled to the plurality of ~~pre-calculated~~ sets of gamut shifting arrays, wherein compensation for color point data through utilization of the plurality of ~~pre-calculated~~ sets of gamut shifting arrays is performed at the full processing speed of the graphics controller.

6. (Original) The color filtering system of claim 1, wherein the input color video data is input from a website.

7. (Original) The color filtering system of claim 1, wherein the non-linearities of the color monitor comprise an input-output characteristic for each constituent color of the color monitor.

8. (Currently Amended) A computer system, comprising:

a processor;

video memory coupled to the processor; and

a color video data correction filtering system coupled to the processor, the system comprising:

a monitor profile that comprises monitor specific color characteristics and monitor specific input-output characteristics;

~~a plurality of linearization tables to gamma decompensate input color video data referenced to a non-linear color space;~~

a plurality of ~~[[a]]~~ sets of ~~pre-calculated~~ gamut shifting arrays adapted to obtain the monitor specific color characteristics from the monitor profile to compensate for color point data of a plurality of constituent colors of a color monitor with each set of pre-calculated gamut shifting arrays corresponding to a multiplication look-up table (MLUT) comprising ~~pre-calculated~~ values that represent specific multiplication operations, ~~each set of pre-calculated gamut shifting arrays coupled to one linearization table of the plurality of linearization tables; and~~

~~a plurality of hardware adders with each hardware adder coupled to one of the set of pre-calculated gamut shifting arrays; and~~

a plurality of non-linearization tables, each adapted to receive an input from one of the sets of gamut shifting arrays coupled to the plurality of hardware adders and to obtain the monitor specific input-output characteristics from the monitor profile to compensate for non-linearities of the color monitor and produce output color video data compensated for non-linearities and color point of the color monitor.

9. (Canceled)

10. (Original) The computer system of claim 8, wherein the plurality of constituent colors referenced to the non-linear color space are from a website.

11. (Original) The computer system of claim 8, wherein the non-linear color space is an sRGB color space.

12. (Currently Amended) The computer system of claim 8, wherein the plurality of ~~pre-calculated~~ sets of gamut shifting arrays is stored in a plurality of look-up tables.

13. (Original) The computer system of claim 8, wherein the non-linearities of the color monitor comprise an input-output characteristic for each constituent color of the color monitor.

14. (Currently Amended) The computer system of claim 8, further comprising:
a graphics controller coupled to the plurality of ~~pre-calculated~~ sets of gamut shifting arrays, wherein compensation for color point data through utilization of the plurality of ~~pre-calculated~~ sets of gamut shifting arrays is performed at the full processing speed of the graphics controller.

15. (Currently Amended) A ~~hardware-implemented~~ method of color video data correction filtering, comprising the steps of:

~~gamma-decompensating input color video data referenced to a non-linear color space;~~

retrieving monitor specific color characteristics and monitor specific input-output characteristics from a monitor profile;

compensating for color point data of a plurality of constituent colors of a color monitor by populating a plurality of gamut shifting arrays with the monitor specific color characteristics and applying the [[a]] plurality of ~~pre-calculated~~ gamut shifting arrays to the color point data, each of the plurality of ~~pre-calculated~~ gamut shifting arrays corresponding to a multiplication look-up table (MLUT) comprising ~~pre-calculated~~ values that represent specific multiplication operations; and

compensating the color point data after application of the plurality of ~~pre-calculated~~ gamut shifting arrays for non-linearities of the color monitor by populating a plurality of non-linearization tables with the input-output specific characteristics and applying [[a]] the plurality of non-linearization tables to the color point data to produce output color video data compensated for non-linearities and color points of the color monitor.

16. (Original) The method of claim 15, wherein the input color video data referenced to the non-linear color space is from a website.

17. (Original) The method of claim 15, wherein the non-linear color space is an sRGB color space.

18. (Canceled)

19. (Original) The method of claim 15, wherein each of the steps of gamma decompensating, compensating using the plurality of pre-calculated gamut shifting arrays and compensating using the plurality of non-linearization tables is performed at a substantially full video rate.

20. (Currently Amended) A color correction system, comprising:

a monitor profile that comprises monitor specific color characteristics and monitor specific input-output characteristics;

a color filter that receives image data and produces color video data;

a color point correction system that receives the monitor specific color characteristics from the monitor profile and applies the monitor specific color characteristics to the color video data [[and]] to produce[[s]] color point corrected video data;
and

a non-linearity correction system that receives the monitor specific input-output characteristics from the monitor profile and applies the monitor specific input-output characteristics to the color point corrected video data [[and]] to produce[[s]] non-linearity corrected video data.

21. (Previously Presented) The color correction system set forth in claim 20, wherein the color filter decompensates for non-linear RGB input based on a standard color image gamma function.

22. (Cancelled)

23. (Currently Amended) The color correction system set forth in claim 2022, wherein each of the plurality of MLUTs are loaded with pre-calculated values that represent specific multiplication operations.

24. (Previously Presented) The color correction system set forth in claim 20, wherein each of the plurality of MLUTs comprises pre-calculated RGB component outputs for each of 256 intensities of each primary color.

25. (Previously Presented) The color correction system set forth in claim 20, wherein the non-linearity correction system comprises a set of non-linearization color look-up tables (CLUTs).